

1 **NOT FOR PUBLICATION**

2
3 **UNITED STATES DISTRICT COURT**
4 **DISTRICT OF NEW JERSEY**

R E C E I V E D

NOV 16 2011

AT 8:30 WILLIAM T. WALSH M
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7 _____)
8 TRANSWEB, LLC,)
9 _____)
10 Plaintiff and)
11 Counterclaim-Defendant,)
12 _____)
13 v.)
14 _____)
15 3M INNOVATIVE PROPERTIES)
16 COMPANY and 3M COMPANY)
17 _____)
18 Defendants and)
19 Counterclaim-Plaintiff)
20 _____)
21 _____)

Civil Action No. 10-4413 (GEB)
MEMORANDUM OPINION

22 **BROWN, Chief Judge**

23 This matter comes before the Court on requests for claim construction from
24 Plaintiff/Counterclaim-Defendant TransWeb, LLC (“Plaintiff”) together with
25 Defendants/Counterclaim-Plaintiffs 3M Innovative Properties Company and 3M Company
26 (collectively “3M” or “Defendants”). The parties submitted their Joint Claim Construction Chart
27 (“JCC”) on June 16, 2011, identifying seven (7) disputed terms. (Doc No. 117.) On July 15,
28 2011, the parties filed their opening claim construction briefs (Doc. Nos. 128, 129), and on
29 September 2, 2011, the parties filed their reply briefs. (Doc. Nos. 159, 160.) A *Markman*
30 hearing was held on November 14, 2011.

31 **I. BACKGROUND**

32 This is a patent infringement case concerning web material used in respirators, masks,
33 and air filters that capture hazardous materials from the air. (See U.S. Patent 6,397,458 (“the

34 '458 patent"); Doc. No. 128-2; U.S. Patent 6,808,551 ("the '551 patent"); Doc. No. 128-7).¹ The
35 webs are "electrets"—a type of material that has a quasi-permanent electrical charge. ('458
36 patent, 1:13-14.) The charge allows an electret to capture and hold onto charged particles,
37 preventing, for example, hazardous materials from entering a mask wearer's lungs. (*Id.* at 1:14-
38 19.)

39 The '458 patent, assigned to 3M, is directed towards a method of making an electret
40 article by transferring fluorine to the article from a gaseous phase. ('458 patent, 1:1-4.) Electrets
41 can lose their charge if they come into contact with oily particles. (*Id.* at 1:29-32.) Fluorinating
42 the electret makes it resistant to oil, thereby preserving the filtering quality of the electret. (*Id.* at
43 1:40-50.) The following '458 claims are representative of those asserted against TransWeb:

44 1. A method of making an electret comprising:
45 fluorinating a polymeric nonwoven web to produce an article
46 having surface fluorination; and
47 charging the fluorinated web in a manner sufficient to produce
48 an electret, the electret comprising at least about 45 atomic %
49 fluorine as detected by ESCA.

51 30. The method of claim 18 [making an electret], wherein the
52 charging step includes hydrocharging, DC corona discharge, or a
53 combination thereof.

55 53. The method of claim 51 [making an electret], wherein the
56 electret has a Quality Factor of at least 2.0/mm H₂O.

58 The '551 patent, also assigned to 3M, is directed towards a method of using fluorinated
59 electrets. ('551 patent, 1: 1-2.) Claim 1 is representative of the claims asserted against
60 TransWeb in this case:

61 1. A method of filtering contaminants, said method comprising:

¹ The '458 and '551 patents share a common specification. All citations of the specification will be to '458 patent.

62 passing an aerosol through a plasma surface modified
63 nonwoven polymeric web electret to remove contaminants from
64 the aerosol,

65 the nonwoven polymeric web comprising plasma surface
66 fluorination, the electret, when tested according to the Initial DOP
67 Penetration Test and the DOP Loading Test prior to contact with
68 the aerosol, exhibiting a DOP penetration of less than 20% for a
69 DOP load from 0.05 grams to 0.2 grams.

70
71 There are seven (7) disputed terms at issue (underlined in the claims above): (1)

72 hydrocharging; (2) contaminants; (3) at least about; (4) the electret having a quality factor of at
73 least 1.0/mmH₂O; (5) wherein the electret has a Quality Factor of at least 1.5/mmH₂O; (6)
74 wherein the electret has a Quality Factor of at least 2/mmH₂O; and (7) charging the fluorinated
75 [web/article] . . . in a manner sufficient to produce an electret.

76
77 **II. DISCUSSION**

78 **A. Standard of Review**

79 The first step in a patent infringement analysis is to define the meaning and scope of the
80 claims of the patent. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995)
81 (*en banc*), *aff'd*, 517 U.S. 370 (1996). Claim construction, which serves this purpose, is a matter
82 of law exclusively for the court. *Id.* at 979. When construing claims, the court must first
83 consider the intrinsic evidence. Specifically, the focus of the court's analysis must begin and
84 remain on the language of the claims, "for it is that language that the patentee chose to use to
85 'particularly point[] out and distinctly claim[] the subject matter which the patentee regards as
86 his invention.'" *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331 (Fed.
87 Cir. 2001) (quoting 35 U.S.C. § 112, ¶ 2).

88 Generally, there is a presumption that the words of a claim will receive the full breadth of
 89 their ordinary meaning. *NTP, Inc. v. Research In Motion, Ltd.*, 392 F.3d 1336, 1346 (Fed. Cir.
 90 2004). The ordinary meaning may be derived from a variety of sources, including: the claim
 91 language, the written description, drawings, the prosecution history, and dictionaries or treatises.
 92 *Id.* This presumption may be rebutted if the patentee acted as his or her own lexicographer by
 93 clearly setting forth a definition of the claim term that differs from its ordinary and customary
 94 meaning. *Brookhill-Wilk I, LLC. v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298-99 (Fed. Cir.
 95 2003). To rebut the presumption, the patentee's intent must be clearly expressed in the
 96 specification. *Merck & Co, Inc. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1370 (Fed. Cir.
 97 2005). When a patent applicant specifically defines a claim term in its description of its
 98 invention, that definition controls. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005)
 99 (*en banc*) ("In such cases, the inventor's lexicography governs."). The Federal Circuit has
 100 "repeatedly encouraged claim drafters who choose to act as their own lexicographers to clearly
 101 define terms used in the claims in the specification." *Sinorgchem Co. v. ITC*, 511 F.3d 1132,
 102 1136 (Fed. Cir. 2007).

103 When the patentee has not provided an explicit definition of a claim term, the words of a
 104 claim are given their plain and ordinary meaning to a person of ordinary skill in the art.
 105 *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The person of
 106 ordinary skill in the art is deemed to read the claim terms in the context of the entire patent,
 107 including the specification. *Phillips*, 415 F.3d at 1313. However, a court should not limit the
 108 claims to the embodiments disclosed in the specification. *See Phillips*, 415 F.3d at 1323.

109 A court may also consider extrinsic evidence when an analysis of the intrinsic evidence
 110 alone does not resolve the ambiguities of a disputed claim term. *Id.* at 1582-83. While a court

111 may rely on extrinsic evidence to construe a claim, “what matters is for the court to attach the
 112 appropriate weight to be assigned to those sources.” *Phillips*, 415 F.3d at 1324. Extrinsic
 113 evidence may never be used to contradict intrinsic evidence. *Id.* at 1322-23.

114 **B. Analysis**

115 There are seven (7) disputed terms at issue: (1) hydrocharging; (2) contaminants; (3) at
 116 least about; (4) the electret having a quality factor of at least 1.0/mmH₂O; (5) wherein the electret
 117 has a Quality Factor of at least 1.5/mmH₂O; (6) wherein the electret has a Quality Factor of at
 118 least 2/mmH₂O; and (7) charging the fluorinated [web/article] . . . in a manner sufficient to
 119 produce an electret.

120 Several of TransWeb’s arguments for claim construction are related to its contentions that
 121 the claims of the patents lack sufficient written description in the specification or are indefinite
 122 and cannot be construed. While indefiniteness has the same construction underpinnings as a
 123 *Markman* hearing, several reasons militate against deciding indefiniteness at this time.

124 First, indefiniteness is proven “where an accused infringer shows by clear and convincing
 125 evidence that a skilled artisan could not discern the boundaries of the claim” based on the
 126 intrinsic evidence or knowledge of the relevant art area. *Halliburton Energy Servs., Inc., v. M-I*
 127 *LLC*, 514 F.3d 1244, 1249-50 (Fed. Cir. 2008). Thus, there is a high burden that would be
 128 difficult to meet at this early stage. Second, neither party has offered expert testimony to support
 129 its indefiniteness or written description arguments², but expert testimony is often helpful in this
 130 task. *Phillips*, 415 F.3d at 1318 (“We have also held that extrinsic evidence in the form of expert
 131 testimony can be useful to a court for a variety of purposes.”); *see also Ortho-McNeil v. Caraco*
 132 *Pharm.*, 476 F.3d 1321 (relying on expert testimony to construe the term “about”). And third,

² The time for expert discovery has not yet expired. (See Amended Scheduling Order; Doc. No. 51.)

133 rather than giving meaning to a claim, as a *Markman* hearing is meant to do, indefiniteness
 134 invalidates the patent claims entirely. *Exxon Research & Eng'g Co. v. United States*, 265 F.3d
 135 1371, 1376 (Fed. Cir. 2001). Thus, the Court could defer the indefiniteness arguments until
 136 summary judgment. *See, e.g., Intergraph Hardware Techs. Co. v. Toshiba Corp.*, 508 F. Supp.
 137 2d 752, 773 n.3 (N.D. Cal. 2007) (“[The] indefiniteness argument is inappropriate at the claim
 138 construction stage.”); *Pharmastem Therapeutics, Inc. v. Viacell Inc.*, 2003 U.S. Dist. LEXIS 877,
 139 at *2 n. 1 (D. Del. Jan. 13, 2003) (“[T]he court will not address the defendants’ indefiniteness
 140 argument at [the Markman hearing].”). Indeed, the Federal Circuit in *Halliburton, Exxon* and
 141 *Datamize* reviewed courts that dismissed the case for indefiniteness at summary judgment, not at
 142 a prior *Markman* hearing. *Halliburton*, 514 F.3d at 1249; *Exxon*, 265 F.3d at 1373; *Datamize*,
 143 *LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005).

144 It may be true that determining the indefiniteness of claim language is a question of law
 145 “that is drawn from the court’s performance of its duty as the construer of patent claims.”
 146 *Exxon*, 265 F.3d at 1373. The same duty gives rise to the *Markman* hearing. However, this does
 147 not outweigh the previous practical considerations that militate against determining
 148 indefiniteness prior to the end of fact or expert discovery. Therefore, as long as the claims are
 149 “amenable to construction, however difficult that task may be[,]” the Court will construe them
 150 here. *Exxon*, 265 F.3d at 1375. The Court’s constructions will be made without prejudice to
 151 TransWeb’s ability through dispositive motions to challenge the validity of the patents based on
 152 lack of written description or indefiniteness under 35 U.S.C. §112.

153

154 1. ***Hydrocharging***
 155

156 3M contends that “hydrocharging” means “contacting an article with water in a manner
 157 sufficient to impart a charge to the article.” (JCC at 1; Doc. No. 117.) TransWeb proposes that
 158 the term means “impinging jets of water or a stream of water droplets onto the article at a
 159 pressure sufficient to impart a filtration enhancing electret charge to the web, and then drying the
 160 article.” (*Id.*)

161 A patent’s “specification may reveal a special definition given to a claim term by the
 162 patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s
 163 lexicography governs.” *Phillips*, 415 F.3d at 1316; *see also Honeywell Int’l, Inc. v. Universal*
 164 *Avionics Sys. Corp.*, 493 F.3d 1358, 1361 (Fed. Cir. 2007) (“When a patentee defines a claim
 165 term, the patentee’s definition governs, even if it is contrary to the conventional meaning of the
 166 term.”). Here, 3M acted as its own lexicographer in defining “hydrocharging.” The
 167 specification provides that charging can be accomplished using a variety of techniques including
 168 “hydrocharging, i.e., contacting an article with water in a manner sufficient to impart a charge to
 169 the article, followed by drying the article.” (‘458 patent, 5:47-49.) It is clear that 3M intended to
 170 define the term and it is this language that 3M adopts as its proposed construction of
 171 “hydrocharging.” *See Edward Lifesciences LLC v. Cook, Inc.*, 582 F.3d 1332, 1334 (Fed. Cir.
 172 2009) (holding that the specification’s use of “i.e.” signals sufficient intent to define the
 173 preceding word). Interestingly though, 3M does not adopt the *entire* definition from the
 174 specification; its proposed construction leaves off the phrase “followed by drying the article.”

175 Additionally, the claim language tracks the definition. Dependant claim 2 recites a
 176 method of making an electret “comprising charging the fluorinated article by contacting the
 177 fluorinated article with water in a manner sufficient to produce an electret, and then drying the

178 article.”³ (‘458 patent, 12:3-6.) That claim is juxtaposed with defendant claim 3, which recites
 179 charging by “impinging jets of water or a stream of water droplets onto the fluorinated article at
 180 a pressure and for a period sufficient to produce an electret, and drying the article.”⁴ (*Id.* at 12:
 181 8-11.) Claims 30, 31, and 32 are the only claims that actually recite the word “hydrocharging”
 182 as a step. (*Id.* at 13: 41-45.) Hence, read together, it is apparent that “hydrocharging” is
 183 intended to be a term covering several methods. Otherwise, there would be no need for the
 184 patentee to differentiate these claims. *See Philips*, 415 F.3d at 1314 (“Differences among claims
 185 can also be a useful guide in understanding the meaning of particular claim terms.”).

186 Nevertheless, TransWeb contends that a person of ordinary skill in the art would
 187 understand the term as TransWeb defines it. The specification states that “[o]ne example of a
 188 useful hydrocharging process includes impinging jets of water or a stream of water droplets on
 189 the article at a pressure and for a period sufficient to impart a filtration enhancing electret charge
 190 to the web, and then drying the article.” (‘458 patent, 5:51-55.) TransWeb insists that this
 191 example is the only method of hydrocharging described in the patent and that no other
 192 embodiments describe any other technique. (*Id.* at 8:45-58) (Example 10). Moreover,
 193 TransWeb points out that the patents-in-suit incorporate U.S. Patent No. 5,496,507 (the “‘507
 194 patent”) when referring to hydrocharging. The ‘507 patent recites a method of charging electret
 195 filter media and generally claims “impinging on a nonwoven web of thermoplastic
 196 nonconductive microfibers capable of having a high quantity of trapped charge jets of water or a
 197 stream of water droplets at a pressure sufficient to provide the web with filtration enhancing

³ The Joint Claim Construction Chart lists claim 2 of the ‘458 patent as containing the term “hydrocharging.” But actually, claim 2 does not contain the word “hydrocharging” and instead contains the specification’s definition of “hydrocharging”—“contacting the fluorinated article with water in a manner sufficient to produce an electret, and drying the article.”

⁴ Oddly, claim 3 is not listed as a claim that contains the term “hydrocharging.” But claim 3’s method is the one TransWeb uses as its definition of hydrocharging.

198 electric charge and drying said web.” (‘507 patent, 1:57-62.) Referencing the ‘507 patent, the
 199 ‘458 and ‘551 patents’ “Background” section explains, “[e]lectrets are currently produced by a
 200 variety of methods including . . . hydrocharging (see, e.g., U.S. Patent No. 5,496,507
 201 (Angadjivand et. al)).” (‘458 patent, 1:20-23.) Furthermore, the specification states that “[a]n
 202 example of a suitable method of hydrocharging is described in the [‘507 patent].” (‘458 patent,
 203 5:61-63.) From these references to the ‘507 patent, TransWeb concludes that a person of
 204 ordinary skill reading the ‘458 patent and ‘551 patent would understand “hydrocharging” as it is
 205 explained in the ‘507 patent. But Court finds TransWeb’s argument regarding the ‘507 patent
 206 unconvincing. The specification makes clear that the method described in the ‘507 patent is but
 207 one example of “hydrocharging” as that term is defined in the patents-in-suit.

208 Additionally, TransWeb argues that 3M’s broad construction is inconsistent with the
 209 specification, and “where a patentee argues for a broad interpretation of a claim term, courts
 210 have found that the specification may serve to show that a narrow meaning is appropriate.”
 211 (Pl.’s Br. at 9; Doc. No. 129.) To support this argument, TransWeb cites two cases that
 212 construed claims to cover the only embodiment described by the specification. *See Toro Co. v.*
 213 *White Consol. Indus.*, 199 F.3d 1295 (Fed. Cir. 1999); *General Am. Transp. Corp. v. Cryo-*
 214 *Trans, Inc.*, 93 F.3d 766 (Fed. Cir. 1996). In both of those cases, the patentee was not permitted
 215 to broadly define a claim term beyond the preferred embodiment where the preferred
 216 embodiment was the only one described. *General Am. Transp. Corp.*, 93 F.3d at 770 (finding
 217 “nothing in the claim language, specification, or drawings” supported the patentee’s broad
 218 construction).

219 Both *Toro* and *General American* are inapposite. Neither of those cases involved the
 220 patentee acting as his own lexicographer. Instead, the patentees in those cases offered

221 constructions that went beyond what the specifications and claims disclosed. In this case,
222 however, not only does TransWeb ask the Court to ignore the patents' express definition of a
223 claim term, it asks the Court to limit a claim term to an embodiment disclosed in the
224 specification. *See SciMed Life Sys. v. Advanced Cardiovascular Sys.*, 242 F.3d 1337, 1340 (Fed.
225 Cir. 2001). “[W]hen claim language is broader than the preferred embodiment, it is well-settled
226 that claims are not to be confined to that embodiment.” *DSW v. Shoe Pavilion*, 537 F.3d 1342,
227 1348 (Fed. Cir. 2008). Here, claims include, but are not limited to the example of hydrocharging
228 provided in Example 10 and the '507 patent incorporated into the patents-in-suit. (*Compare*
229 '458 patent claim 2 *with* claim 3.)

230 The parties also disagree on the impact of a piece of extrinsic evidence: the deposition
231 testimony of one of the '458 and '551 patent inventors, Dr. Seyed Angadjivand. TransWeb
232 suggests that Dr. Angadjivand had not developed any hydrocharging methods other than using a
233 hydroentangler or spray nozzle, both involving impinging jets of water at high pressure. (Pl.'s
234 Br. At 11-14; Doc. No. 129.) Because Dr. Angadjivand had not investigated any other methods
235 for the '458 or '551 patents, had not reduced to practice any other methods, TransWeb concludes
236 that “hydrocharging” should be construed only to cover what had actually been invented—
237 impinging jets of water at high pressure. TransWeb points to the deposition testimony of Dr.
238 Angadjivand, where he stated that he had not recommended proceeding with other
239 hydrocharging methods because “at that time we did not have enough experience, didn't have
240 enough experiment, so we just showed the feasibility. We were far ahead with the other two, so
241 I recommended the other two.” (Pl.'s Ex. G at 97:1-25; Doc. No. 129-1.) But, as 3M pointed
242 out during the *Markman* hearing, this testimony is, at best, ambiguous. 3M concluded from the
243 testimony that Dr. Angadjivand invented four methods of hydrocharging—hydroentangler, spray

244 nozzle, funnel, and dipping—but recommended commercializing only the first two.
245 Consequently, this piece of extrinsic evidence is of no significant value and certainly cannot be
246 used to contradict the intrinsic evidence.

247 Accordingly, the Court relies on the intrinsic evidence presented by the parties and finds
248 that the evidence supports Defendants' construction. The specification sufficiently demonstrates
249 a clear intent that the patentee wished to act as his own lexicographer in defining
250 "hydrocharging," and it is that definition that controls. TransWeb will not be permitted to limit
251 the definition of the term to one example of that method. Therefore, "hydrocharging" means
252 "contacting an article with water in a manner sufficient to impart a charge to the article, followed
253 by drying the article."

254

255 **2. *Contaminants***

256
257 3M defines this term as "particles and/or other substances that generally may not be
258 considered to be particles (e.g., organic vapors)." (JCC at 2; Doc. No. 117.) TransWeb argues
259 this term should be defined as "particles and/or other substances that are generally considered
260 undesirable." (*Id.*)

261 Here, again, the patentee has defined the claim term in the specification. "When a
262 patentee defines a claim term, the patentee's definition governs, even if it is contrary to the
263 conventional meaning of the term." *Honeywell Int'l, Inc.*, 493 F.3d at 1361. In the "Glossary"
264 section, the specification provides that "'contaminants' means particles and/or other substances
265 that generally may not be considered to be particles (e.g., organic vapors)." ('458 patent, 3:22-
266 24.) 3M adopts this definition verbatim.

267 TransWeb's definition of "contaminants" incorporates a part of the patent's glossary
 268 definition but adds a dictionary definition, which TransWeb argues gives the term its "ordinary
 269 meaning" so that a person skilled in the art can understand what a "contaminant" is. (Pl.'s Br. at
 270 15; Doc. No. 129.) TransWeb argues its dictionary definition does not change the definition
 271 already provided in the patents' glossary section, rather its definition is "consistent with and not
 272 contradictory to any definition in the intrinsic record." (Pl.'s Reply Br. At 14; Doc. No. 160.)
 273 TransWeb cites to claim language in the '458 and '551 patents, suggesting the patentee
 274 considered contaminants to be "undesirable." Claim 23 states, "the fluorination step *prevents*
 275 *contaminants from interfering* with the addition of fluorine atoms." ('458 patent, 13: 21-24)
 276 (emphasis added). And the independent claims of the '551 patent require "passing an aerosol
 277 through . . . [an electret] to *remove contaminants* from the aerosol." ('551 patent, 12:19-23,
 278 13:22-25, 14:3-24) (emphasis added). This language, contends TransWeb, demonstrates that the
 279 intrinsic evidence supports its addition of the dictionary definition of "contaminant" as
 280 "undesirable." Should the Court adopt 3M's definition, TransWeb argues that the term will be
 281 ambiguous, self-contradictory, and will offer no useable meaning. (Pl.'s Reply Br. at 11; Doc.
 282 No. 160.) This is because the TransWeb reads the term to entail "particles that generally may
 283 not be considered to be particles." (Pl.'s Reply Br. At 11; Doc. No. 160.)

284 But the Court notes that there is another way to read the glossary definition.
 285 "Contaminants" includes two, distinguishable clauses: (1) particles, and/or (2) substances that
 286 generally may not be considered to be particles. Furthermore, while there is a presumption that
 287 the words of a claim will receive their ordinary meaning, *NTP, Inc.*, 392 F.3d at 1346, this
 288 presumption is rebutted if the patentee acted as his or her own lexicographer. *See Brookhill-Wilk*
 289 *LLC.*, 334 F.3d at 1298-99. When a patent applicant specifically defines a claim term in its

290 description of its invention, his definition controls. *Phillips*, 415 F.3d at 1316. In this case, 3M
291 rebutted any presumption that a “contaminant” must be “undesirable,” by expressly defining it
292 otherwise in its glossary. The inquiry ends here. “Contaminant” means “particles and/or other
293 substances that generally may not be considered to be particles (e.g., organic vapors).”

294

295 **3. *At least about***

296 3M contends that the term is straightforward and that it does not need construction.
297 (Def.’s Br. at 12; Doc. No. 128). Alternatively, 3M argues that it means “at least
298 approximately,” and that “‘approximately’ means within the range of experimental error a person
299 of skill in the art would expect when he/she uses the test methodology described in the Patent.”
300 (JCC at 2; Doc. No. 117.) TransWeb argues that this claim term is indefinite and offers no
301 construction. (*Id.*)

302 “The word ‘about’ does not have a universal meaning in patent claims . . . the meaning
303 depends on the technological facts of a particular case.” *Ortho-McNeil Pharm., Inc. v. Caraco*
304 *Pharm. Labs, Ltd.*, 476 F.3d 1321, 1326 (Fed. Cir. 2007). The court in *Amgen, Inc. v. Chugai*
305 *Pharmaceutical Co.* held that the term “about 160,000 IU/AU” (signifying erythropoietin
306 activity *in vitro*) was indefinite because nothing in the specification, prosecution history, or prior
307 art provided any indication as to what specific range of activity might be covered by the term
308 “about.” *See* 927 F.2d 1200, 1218 (1991). The court noted that no expert testimony was
309 available to facilitate construction of the term and that its “holding that the term ‘about’ renders
310 indefinite [the claims] should not be understood as ruling out any and all uses of this term in
311 patent claims. It may be acceptable in appropriate fact situations.” *Id.*

313 Generally, courts have been able to construe patent claim terms that use qualifying
314 words. “Such broadening usages as ‘about’ must be given reasonable scope; they must be
315 viewed by the decisionmaker as they would be understood by persons experienced in the field of
316 the invention.” *Modine Mfg. Co. v. United States Int’l Trade Comm’n*, 75 F.3d 1545, 1554 (Fed.
317 Cir. 1996) (quoting *Andrew Corp. v. Gabriel Electronics, Inc.*, 847 F.2d 819, 821-22 (Fed. Cir.
318 1988)). Thus, where intrinsic evidence as to technical meaning or, if intrinsic evidence is
319 unavailable, expert testimony is supplied to assist in determining the meaning of “about,” the
320 court will adopt that construction and find the terms definite. *See, e.g., Cohesive Techs., Inc. v.*
321 *Waters Corp.*, 543 F.3d 1351, 1369 (Fed. Cir. 2008); *BJ Servs. Co. v. Halliburton Energy Servs.*,
322 338 F.3d 1368, 1372-73 (Fed. Cir. 2003). Where such intrinsic or extrinsic evidence is not
323 available, “about” has been given its plain and ordinary meaning—“approximately.” *See, e.g.,*
324 *Merck & Co.*, 395 F.3d at 1369-70.

325 Here, neither party has offered expert testimony, but it is likely that “at least about” is
326 amenable to construction and can be given its ordinary meaning, as it would be understood by a
327 person of ordinary skill in the art. TransWeb argues that because there is no intrinsic evidence or
328 expert testimony as to a specific rate of error (e.g., $\pm .05/\text{mm H}_2\text{O}$ Quality Factor), no person of
329 ordinary skill in the art could understand the metes and bounds of the claims. The intrinsic
330 evidence does not suggest any exact numerical range, but numerous courts have found this
331 acceptable and defined “about” to mean “approximately.” *Merck & Co.*, 395 F.3d at 1369-70;
332 *Astrazeneca Pharms. LP v. Handa Pharms, LLC*, 2010 WL 4941431, at *4 (D.N.J. Nov. 30,
333 2010); *Teva Pharm Indus. Ltd v. Dr. Reddy’s Labs, Ltd*, 2008 WL 2557510, at *6 (D.N.J. June
334 23, 2008).

335 Convincing here, the patents, in detail, provide the methodologies that a person of
 336 ordinary skill in the art should use to assess the claim limitations. Specifically, the patent details
 337 how to measure oil resistance using Quality Factor, how to measure surface fluorination using
 338 electron spectroscopy for chemical analysis (“ESCA”), and how to determine the CF₃:CF₂ ratio.
 339 (‘458 patent, 3:42-62; 3:66-4:7; 6:20-36.) 3M’s definition of “at least about” recognizes that a
 340 person of ordinary skill in the art would understand these methodologies and their application to
 341 the art, even if no specific ranges of error are provided. In other words, with these testing
 342 methodologies in mind, a person of ordinary skill would understand that “about” means
 343 “approximately” because one generally accounts for experimental testing error. *See BJ Servs.*
 344 *Co. v. Halliburton Energy Servs.*, 338 F.3d 1368, 1372 (Fed. Cir. 2003) (“That some claim
 345 language may not be precise, however, does not automatically render a claim invalid.”). Indeed,
 346 3M cites the deposition testimony of TransWeb’s vice-president, Kumar Ogale, who agreed that
 347 a person familiar with each of the tests above would understand approximately what the rate of
 348 experimental error would be. (Def.’s Ex. C at 216:8-218:9; Doc. No. 159-4) (“Q: Do you or
 349 would someone who’s familiar with the [DOP loading] test have an understanding of
 350 approximately what the error rate would be? A: Yes.”).

351 Consequently, for purposes of construing “at least about,” the Court finds that a person of
 352 ordinary skill would not be left without guidance as to an error range, which the specification
 353 allows to be “interpreted in its technologic and stylistic context.” *Pall Corp. v. Micron*
 354 *Separations*, 66 F.3d 1211, 1217 (Fed.Cir. 1995). Preserving the issue of indefiniteness or lack
 355 of written description under 35 U.S.C. 112 for dispositive motions, the Court concludes that “at
 356 least about” means “at least approximately.”

358 4. *The electrets having a quality factor of at least 1.0/mm H₂O*
 359 *Wherein the electrets has a Quality Factor of at least 1.5/mm H₂O*
 360 *Wherein the electrets has a Quality Factor of at least 2/mm H₂O*

361
 362 3M defines these terms as meaning “[wherein] the electrets [as defined] having a quality
 363 factor of at least [1.0/1.5/2 mm H₂O], as determined by the method for measuring Quality Factor
 364 described in the patent.” (JCC at 3-5; Doc. No. 117.) TransWeb argues that these terms mean
 365 “[wherein] the electrets having a quality factor of at least [1.0/1.5/2 mm H₂O] achieved by AC
 366 corona fluorination, impinging jets of water at a pressure sufficient to produce an electret and
 367 then drying the article, or by using a web having a basis weight of about 200 g/m².²” (*Id.*)

368 The dispute concentrates on the term “quality factor.” 3M insists that it has essentially
 369 acted as its own lexicographer in defining this term, and its construction does not go beyond the
 370 formula. The specification states:

371 Initial DOP penetration is determined by forcing 0.3 micrometer
 372 diameter dioctyl phthalate (DOP) particles at a concentration of
 373 between 70 and 140 mg/m³ (generated using a TSI No. 212 sprayer
 374 with four orifices and 30 psi clean air) through a sample of filter
 375 media which is 4.5 inches in diameter at a rate of 42.5 L/min (a
 376 face velocity of 6.9 centimeters per second). The sample is
 377 exposed to the DOP aerosol for 30 seconds until the readings
 378 stabilize. The penetration is measured with an optical scattering
 379 chamber, Percent Penetration Meter Model TPA-8F available from
 380 Air Techniques Inc. Pressure drop across the sample is measured
 381 at a flow rate of 42.5 L/min (a face velocity of 6.9 cm/sec) using an
 382 electronic manometer. Pressure drop is reported in mm of water
 383 (“mm H₂O”). DOP penetration and pressure drop are used to
 384 calculate the quality factor “QF” from the natural log (ln) of the
 385 DOP penetration by the following formula:

$$387 \\ 388 \\ 389 \\ 390 \\ 391 \\ QF[1/\text{mm H}_2\text{O}] = \frac{-\ln \frac{\text{DOP Penetration}(\%)}{100}}{\text{Pressure Drop}[\text{mm H}_2\text{O}]}$$

392 ('458 patent, 6:39-60.) 3M contends that this measurement and corresponding formula are
 393 sufficient to define "quality factor." It also points out that the formula was sufficient to
 394 demonstrate to the USPTO that the term "quality factor" was enabled. (Def.'s Ex. 3 at 6; Doc.
 395 No. 128-4.)

396 TransWeb counters that 3M's proposed construction is too broad and that TransWeb's
 397 construction properly limits the term to the techniques that must be used to achieve the required
 398 quality factors. (Pl.'s Br. at 21; Doc. No. 129.) TransWeb relies on the fact that in most of the
 399 examples in the specification for which quality factor is over 1.0/mm H₂O, the article was
 400 produced by AC corona fluorination or impinging jets of water at a pressure sufficient to produce
 401 an electret and then drying the article. The exception, example 17, was charged using only DC
 402 corona discharge, but had a basis weight of 200 g/m².⁵ TransWeb argues that the specification
 403 discloses only one embodiment: "that is, only by using AC corona fluorination, impinging jets of
 404 water at a pressure sufficient to produce an electret and then drying the article, or by using a web
 405 having a basis weight of about 200 g/m², would one skilled in the art understand how to achieve
 406 [the claimed quality factors.]" (Pl.'s Br. at 22-23; Doc. No. 129.) Consequently, TransWeb
 407 concludes that since this is the only embodiment supporting the electrets with required quality
 408 factors, those techniques limit the claim term to its proper scope. *See Toro*, 199 F.3d 1295;
 409 *General Am. Transp.*, 93 F.3d 766.

⁵ TransWeb concludes that because hydrocharging was not used to produce a high quality factor in Example 17, it must have been the high basis weight that was the dominant factor in achieving the high quality factor. TransWeb cites to Example 18, which used a 200 gm² basis weight and also achieved a high quality factor. This argument is flawed for two reasons. First, it is a classic example of correlation without causation: TransWeb offers no evidence that it is the high basis weight that actually caused a high quality factor; it very well could have resulted from DC corona discharge. Second, Example 18 was charged using AC corona fluorination, which TransWeb includes a technique to achieve sufficient quality factor.

410 The Federal Circuit has reinforced that “although the specification often describes very
 411 specific embodiments of the invention, [the court has] repeatedly warned against confining the
 412 claims to those embodiments.” *Phillips*, 415 F.3d at 1323. Yet TransWeb’s definition seeks to
 413 import limitations from several different embodiments (not just one). Further, a person of
 414 ordinary skill is unlikely to understand a measurement (e.g., 1.0/mm H₂O) in terms of the
 415 processes by which it is achieved; rather one would understand it in terms of how it is calculated.
 416 *Id.* (“[T]he line between construing terms and importing limitations can be discerned with
 417 reasonable certainty and predictability if the court’s focus remains on understanding how a
 418 person of ordinary skill in the art would understand the claim terms.”). Here, the term focuses on
 419 the measurable characteristics of the finished product, not on the methods used to make it.

420 Therefore, the Court construes “the electret having a quality factor of at least 1.0/mm
 421 H₂O” to mean “the electret [as defined] having a quality factor of at least 1.0/mm H₂O, as
 422 determined by the method for measuring Quality Factor described in the patent.” The term
 423 “wherein the electret has a Quality Factor of at least 1.5/mm H₂O” means “wherein the electret
 424 [as defined] has a Quality Factor of at least 1.5/mm H₂O, as determined by the method for
 425 measuring Quality Factor in the patent.” And the term “wherein the electret has a Quality Factor
 426 of at least 2/mmH₂O” means “wherein the electret [as defined] has a Quality Factor of at least
 427 2/mm H₂O, as determined by the method for measuring Quality Factor described in the patent.”

428

429 5. ***Charging the fluorinated [web/article] . . . in a manner sufficient to produce an***
 430 ***electret***

431
 432 3M asserts that this term means “imparting a charge to the [web/article] so the end
 433 product is an electret [as defined]. Before one imparts the charge, the article may be either

434 charged or uncharged.” (JCC at 7-8; Doc. No. 117.) TransWeb argues that this term is
 435 indefinite, a challenge the Court will defer as explained above. (Pl.’s Reply Br. at 25; Doc. No.
 436 160.) Alternatively, TransWeb defines this term as “charging the fluorinated web/article, such
 437 that the charging process alone is sufficient to impart a quasi-permanent electrical charge to the
 438 fluorinated web/article.” (JCC at 7-8; Doc. No. 117.)

439 The dispute surrounding this term focuses on whether the preferred embodiment is
 440 included in the parties’ proposed constructions. 3M argues that its proposed construction should
 441 be adopted because it includes the preferred embodiment, whereas TransWeb’s construction does
 442 not. “A claim construction that excludes the preferred embodiment ‘is rarely, if ever, correct and
 443 would require highly persuasive evidentiary support.’” *Adams Respiratory Therapeutics, Inc. v.*
 444 *Perrigo Co.*, 616 F.3d 1283, 1290 (Fed. Cir. 2010) (quoting *Vitronics Corp. v. Conceptronic*
 445 *Inc.*, 90 F.3d 1576, 1583-84 (Fed. Cir. 1996)). Specifically, 3M notes that, in the preferred
 446 embodiment, the fluorination step charges the web before the “charging step.” (Def.’s Br. at 20;
 447 Doc. No. 128.) This is because “[t]he electrical discharge applied during the fluorination process
 448 is capable of modifying the surface chemistry of the polymeric article when applied in the
 449 presence of a source of fluorine containing species.” (‘458 patent, 5:21-24.) Consequently, 3M
 450 concludes that “before one imparts the charge, the article may be either charged or uncharged.”
 451 (JCC at 7-8; Doc. No. 117.) 3M faults TransWeb’s construction “because it reads the preferred
 452 embodiment out of the claims by requiring the electret to become charged through ‘the charging
 453 process alone.’” (Def.’s Br. at 21-22; Doc. No. 128.)

454 But TransWeb’s construction does not read out the preferred embodiment. TransWeb
 455 and 3M agree that the critical “charging step” occurs after the web is fluorinated. The logical
 456 inference is that it is the charging step that is applied to the fluorinated web (not fluorination

457 itself) that must be sufficient to produce an electret. That is consistent with the intrinsic
458 evidence. After the specification details the fluorination process, it explains that “[c]harging the
459 polymeric article to produce an electret can be accomplished using a variety of techniques.”
460 (‘458 patent, 5:45-46.) Thus, it is logical that the “charging process” is alone sufficient to impart
461 the defined characteristics of an electret. While a charge may be created through fluorination,
462 that charge is not sufficient to produce an electret. Otherwise, the “charging step” (e.g.,
463 hydrocharging and corona charging) would be unnecessary.

464 TransWeb argues that, according to 3M’s construction, an article or web could start out
465 as an electret. That is based on 3M’s second sentence, which adds that “before one imparts the
466 charge, the article may be either charged or uncharged.” But the second sentence finds support
467 in the specification and claims. Claim 1 separates steps, reciting a “method of making an electret
468 comprising: [1] fluorinating a polymeric nonwoven web to produce an article having surface
469 fluorination; and [2] charging the fluorinated web in a manner sufficient to produce an electret . .
470 . .” (‘458 patent, 11:63-67) (brackets added). It is that first step, reflected in 3M’s second
471 sentence, that may impart some charge. (‘458 patent, 5:21-24) (“The electrical discharge applied
472 during the fluorination process is capable of modifying the surface chemistry of the polymeric
473 article when applied in the presence of a source of fluorine containing species.”). And according
474 to 3M, a person of ordinary skill in the art would understand that fluorination may impart a
475 charge. (Def.’s Br. at 20; Doc. No. 128.)

476 The Court finds that both constructions convey ordinary meaning and are in harmony with
477 the intrinsic evidence. Fluorinating the article can result in a charged or uncharged article, but
478 the “charging process” alone, imparts a charge sufficient to impart a quasi-permanent electrical
479 charge to the fluorinated web/article. However, to be precise, the first step (fluorination) is not

480 implicated directly by the disputed claim term and does not require defining. Only the second
481 step (charging the fluorinated web sufficient to produce an electret) requires construction.
482 TransWeb's proposed construction, because it focuses on the charging step, best accomplishes
483 this task. Accordingly, the Court construes "charging the fluorinated [web/article] . . . in a
484 manner sufficient to produce an electret" to mean "charging the fluorinated web/article, such that
485 the charging process alone is sufficient to impart a quasi-permanent electrical charge to the
486 fluorinated web/article."

487

488 **III. CONCLUSION**

489 For the reasons stated herein and for the reasons set forth on the record during the
490 *Markman* hearing, the Court construes the terms of the of U.S. Patent No. 6,397,458 and U.S.
491 Patent No. 6,808,551 as announced in the order accompanying this memorandum opinion.

492

493 Dated: November 16, 2011

494 Garrett E. Brown, Jr.
495 GARRETT E. BROWN, JR., U.S.D.J.
496

497